

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Substitute for form 1449/PTO

Complete if Known
Application Number NEW APPLICATION
Filing Date HEREWITH
First Named Inventor Milan K. Kta
Attorney Docket Number 1035-BI4282

Sheet 1 of 3
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U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. 1	U.S. Patent Document Number	Kind Code 2 (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
SSS	AA	3,655,439		SEITER	04/11/1972	
SSS	AB	3,658,586		WANG	04/25/1972	
SSS	AC	3,796,597		V.R. PORTER, et al.	03/12/1974	
SSS	AD	4,177,321		NISHIZAWA	12/04/1979	
SSS	AE	5,741,724		RAMDANI, et al.	04/21/1998	
SSS	AF	5,850,410		KURAMATA	12/15/1998	
SSS	AG	5,530,267		BRANDLE, JR., et al.	06/25/1996	
SSS	AH	6,104,529		BRANDLE, JR., et al.	08/15/2000	
SSS	AI	3,883,313		CULLEN, et al.	05/13/1975	
SSS	AJ	5,802,083		BIRNBAUM	09/01/1998	
SSS	AK	2003/0007520	A1	KOKTA, et al.	01/09/2003	

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SSS	AL	EP	0 148 656	A1	AUZEL, et al.	11/16/1984		<input type="checkbox"/>
	AM							<input type="checkbox"/>

PUBLICATIONS

Examiner Initials *	Cite No. 1	Title of Publication	Date of Publication of Cited Document MM-DD-YYYY
SSS	AV	YUMASHEV K.V., et al., "Co ²⁺ -doped spinels saturable absorber Q-switches for 1.3-1.6 μ m solid state lasers", OSA TRENDS IN OPTICS AND PHOTONICS. ADVANCED SOLID STATE LASERS., Vol. 34, pp. 236-239, 2000. XP008017966	
SSS	AW	YUMASHEV, K.V., et al., "Passive Q-switching of 1.34- μ m neodymium laser using Co ²⁺ :LiGa ₅ O ₈ and Co ²⁺ :MgAl ₂ O ₄ ", CONFERENCE DIGEST, 2000, 1 page. XP002242959	
SSS	AX	OKTYABRSKY, S., et al., "Crystal structure and defects in nitrogen-deficient GaN", MRS Internet J. Nitride Semicond. Res, G6.43, pp. 1-6, 1999.	
SSS	AY	KLEBER, W., et al., "Zur epitaxie von galliumnitrid auf nichtstochiometrischem spinell im system GaCl/NH ₃ /He", CRYSTAL RESEARCH AND TECHNOLOGY, Vol. 10, No. 7, pp. 747-758, 1975. (English Abstract)	
SSS	AZ	SEIFERT, A., "Nachweis von stapelfehlern in GaN-epitaxieschichten mittels elektronenbeugung", CRYSTAL RESEARCH AND TECHNOLOGY, Vol. 10, No. 7, pp. 741-746, 1975. (English Abstract)	
Examiner Signature	<i>Steph Steini</i>		Date Considered 11/14/04

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Unique citation designation number. 2 See attached Kinds of U.S. Patent Documents. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

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SSS	BA	6,533,874	B1	VAUDO, et al.	03/18/2003	
SSS	BB	4,627,064		AUZEL, et al.	12/02/1986	
SSS	BC	4,000,977		FALCKENBERG	01/04/1977	
	BD					
	BE					
	BF					
	BG					
	BH					
	BI					
	BJ					
	BK					

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	BL						<input type="checkbox"/>
	BM						<input type="checkbox"/>

PUBLICATIONS

Examiner Initials *	Cite No. 1	Title of Publication	Date of Publication of Cited Document MM-DD-YYYY
SSS	BW	OHSATO, H., et al., "Epitaxial orientation and a growth model of (0 0 1) GaN thin film on (1 1 1) spinel substrate", JOURNAL OF CRYSTAL GROWTH, Vol. 189/190, pp. 202-207, 1998.	
SSS	BX	YANG, H. -F., et al., "Microstructure evolution of GaN buffer layer on MgAl ₂ O ₄ substrate", JOURNAL OF CRYSTAL GROWTH, Vol. 193, pp. 478-483, 1998.	
SSS	BY	DUAN, S., et al., "MOVPE growth of GaN and LED on (1 1 1) MgAl ₂ O ₄ ", JOURNAL OF CRYSTAL GROWTH, Vol. 189/190, pp. 197-201, 1998.	
SSS	BZ	SHELDON, R., et al., "Cation Disorder and Vacancy Distribution in Nonstoichiometric Magnesium Aluminate Spinel, MgO · Al ₂ O ₃ ", J. AM. CERAM. SOC., Vol. 82, No. 12, pp. 3293-3298, 1999.	
Examiner Signature	<i>Stephen Starni</i>		Date Considered 11/14/04

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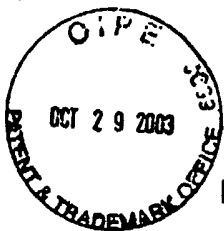
PUBLICATIONS

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SSS	AAA	KULESHOV, N.V., et al. "Co-doped spinels: promising materials for solid state lasers", LONGER WAVELENGTH LASERS AND APPLICATIONS, Vol. 2138, pp. 175-182, 1994. XP008017848	
SSS	AAB	KULESHOV, N.V., et al. "Absorption and luminescence of tetrahedral Co ²⁺ ion in MgAl ₂ O ₄ , Vol. 55, no. 5-6, pp. 265-269, 1993. XP008017849	
SSS	AAC	NIKISHIN, S.A., et al., "Gas source molecular beam epitaxy of GaN with hydrazine on spinel substrates", APPLIED PHYSICS LETTERS, Vol. 72, No. 19, pp. 2361-2363, 1998. XP000755963	
SSS	AAD	HAISMA, et al., "Lattice constant adaptable crystallographics", JOURNAL OF CRYSTAL GROWTH, Vol. 102, pp. 979-993, 1990. XP002250056	
SSS	AAE	TAMURA, K., et al., "Epitaxial growth of ZnO film on lattice-matched ScAlMgO ₄ (0001) substrates", JOURNAL OF CRYSTAL GROWTH, Vol. 214-215, pp. 59-62, 2000. XP004200964	
SSS	AAF	WYON, et al., "Czochralski growth and optical properties of magnesium-aluminum spinel doped with nickel", JOURNAL OF CRYSTAL GROWTH, Vol. 79, pp. 710-713, 1986. XP002250057	
SSS	AAG	TSUCHIYA, T., et al. "Epitaxial growth of InN films on MgAl ₂ O ₄ (1 1 1) substrates", JOURNAL OF CRYSTAL GROWTH, Vol. 220, pp. 185-190, 2000.	
SSS	AAH	KURAMATA, Akito, et al., "High-quality GaN epitaxial layer grown by metalorganic vapor phase epitaxy on (111) MgAl ₂ O ₄ substrate", APPL. PHYS. LETT., Vol. 67, No. 17, pp. 2521-2523, 1995.	
SSS	AAI	MITCHELL, T., "Dislocations and Mechanical Properties of MgO- MgAl ₂ O ₃ spinel single crystals", J. AM. CERAM. SOC., Vol. 82, No. 12, pp. 3305-3316, 1999.	
SSS	AAJ	HELLMAN, E., "Exotic and Mundane substrates for gallium nitride heteroepitaxy", BELL LABORATORIES, THC2, Murray Hill, NJ.	
SSS	AAK	KRUGER, M.B., et al., "Equation of state of MgAl ₂ O ₄ spinel to 65 GPa", THE AMERICAN PHYSICAL SOCIETY, Vol. 56, No. 1, pp. 1-4, 1997.	
SSS	AAL	KURAMATA, A., et al., "Properties of GaN epitaxial layer grown on (111) MgAl ₂ O ₄ substrate", SOLID-STATE ELECTRONICS, Vol. 41, No. 2, pp. 251-254, 1997.	
SSS	AAM	GRITSYNA, V., et al., "Structure and Electronic states of defects in spinel of different compositions MgO · n MgAl ₂ O ₃ · Me", J. AM. CERAM. SOC. Vol. 82, No. 1, pp. 3365-3373, 1999.	
Examiner Signature	<i>Stephen Stern</i>		Date Considered 11/14/04

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Complete if Known
Application Number 10/669,141
Filing Date September 23, 2003
First Named Inventor Milan Kokta
Group Art Unit
Examiner Name
Attorney Docket Number 1035-BI4282

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SSS	AA	4,493,720		Gauthier, et al.	01/15/1995	
SSS	AB	5,644,400		Mundt	07/01/1997	
SSS	AC	5,768,335		Shahid	06/16/1998	
SSS	AD	5,825,913		Rostami, et al.	10/20/1998	
SSS	AE	5,822,213		Huynh	10/13/1998	
SSS	AF	6,021,380		Fredriksen, et al.	02/01/2000	
SSS	AG	4,819,167		Cheng, et al.	04/04/1989	
	AH					
	AI					
	AJ					

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PUBLICATIONS

Examiner Initials *	Cite No. 1	Title of Publication	Date of Publication of Cited Document MM-DD-YYYY
	AW		
	AX		
	AY		
	AZ		

Examiner Signature	<i>Steph Shen</i>	Date Considered	11/17/04
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